1977

Chemical Weed Control in Soybeans 1977

Cooperative Extension South Dakota State University

Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

For current policies and practices, contact SDSU Extension

Website: extension.sdstate.edu
Phone: 605-688-4792
Email: sdsu.extension@sdstate.edu

FS 525B
(Revised annually)

Chemical Weed Control in Soybeans 1977

COOPERATIVE EXTENSION SERVICE
SOUTH DAKOTA STATE UNIVERSITY
U.S. DEPARTMENT OF AGRICULTURE

Chemical Weed Control in Soybeans 1977

By **Leon J. Wrage**, Extension agronomist—weeds
W. E. Arnold, associate professor, plant science

Weed losses in soybeans can be serious. A good rotation, proper seedbed preparation, timely cultivation and herbicides are useful control practices.

Most perennial weeds cannot be controlled without some losses by any method; and annual weeds such as sunflower, cocklebur or velvetleaf are more difficult to control in soybeans than in other row crops. Therefore cultivation and crop rotation are important parts of an efficient weed control program. Timely cultivation and the use of herbicides in other rotational crops are also helpful.

Narrow rows usually increase yields and improve competitiveness of the crop. However, solid-planted or close-drilled soybeans cannot be cultivated with conventional implements. Serious weed problems result with this planting system if herbicides do not perform satisfactorily or if weed species are present that are tolerant to the herbicide.

Cultivation for Weed Control

Proper tillage immediately before planting kills emerged weeds and prevents other weeds from getting a head start on the crop. A rotary hoe or flextine harrow is useful when the crop is small.

After planting, you can choose from several cultivation systems. In conventional row-spaced beans, you can use a row-crop cultivator. Do not "hill" the row during the last cultivation; this prevents harvesting of lower pods and results in an unnecessary loss of 2 to 5 bushels of beans per acre.

Special row cultivators designed for minimum-till planting systems reduce the problems caused by plant residue on the soil surface. Chopping or shredding the previous year's corn stalks also reduces cultivation problems.

Rotary Hoe. Use a rotary hoe at a speed of 8 to 10 miles per hour. It is most effective if used before small weed seedlings develop green color, and if the soil is crusted. Hoeing during the heat of the day reduces breakage if bean plants are large. Two hoeings can be done for about the same cost as the first row cultivation.

Flextine Harrow. Operate a flextine harrow at 2 miles per hour or less. It is most effective on weed seedlings less than ¼ inch high. Three harrowings can be done for about the same cost as the first row cultivation.

Herbicides for Weed Control

Herbicides can aid in controlling weeds in soybeans, but are not intended as replacements for sound management.

Granules vs Spray Formulations. Some herbicides are available in spray or granular formulations. Granules are preferred by some growers because they are easier to handle when band treating. However, granules usually cost slightly more per pound of active ingredient than spray formulations.

Broadcast vs Band Application. Band applications reduce the cost per acre for chemical. They provide early season weed control and reduce yield losses that occur during the first 3 to 4 weeks after planting. Use a band that is 12 to 14 inches wide for surface-planted soybeans. Use special nozzles that apply the herbicide uniformly behind the press wheel of the planter.

Preplant-incorporated herbicides usually are not banded because suitable equipment is generally not available to incorporate the herbicide properly in the row ahead of the planter.

For band application, determine the amount needed for the area actually treated. For example, if the broadcast rate of 3 lb/A of product is applied in 12-inch bands to 36-inch rows, only a third of the area is actually treated as the field is crossed, and only one-third of the 3 lb/A rate is needed. Therefore, 1 pound of product is all that is needed to band spray each acre. (See Fact Sheet 342, "Checking Weed Sprayers.")

Minimum Tillage. Reduced tillage systems usually leave more plant residue on the surface. This residue may distort the herbicide pattern on the soil or intercept some of the chemical. This lowers the overall weed control rating. Devices to remove the residue from the row area will reduce this problem for preemergence band applications.

Combinations and Mixtures. Combinations of herbicides can capitalize on the good points of several herbicides while minimizing weak points. Herbicides used in mixtures may be purchased separately and tank-mixed in the sprayer, or some may be purchased in one container as a commercial pre-mix. Tank mixtures allow more flexibility in selecting the rate of each herbicide to be used. Mix only those herbicides that are labeled for use together.

Check the product label for mixing directions. Usually wettable powder or flowable formulations should be pre-mixed with water before adding to the spray tank. Add emulsifiable concentrates last. Agitation is required. It is advisable to test mix a small quantity of the products before filling the sprayer.

Herbicides

Information in this publication is based on research by the South Dakota Agricultural Experiment Station and other research or observations. Herbicides are included only after the chemical is registered by the Environmental Protection Agency (EPA) as to residue tolerances in crops used for food or feed.

Information in this fact sheet is designed to provide a summary of herbicide uses and does not imply a guarantee or responsibility for results. You need the following information to secure the maximum benefits from the tables.

1. **Weed problem.** Weeds are classified as broadleaved weeds (includes the more common weeds such as lambsquarters, pigweed, and kochia) and weedy grasses (includes green and yellow foxtail). A few special weeds are listed individually. Herbicide performance on specific weed species is given in Table 1.

2. **Chemicals.** Herbicide uses are based on the actual chemical (active ingredient) in each herbicide product. The common and trade name of most chemicals is listed. Product formulation is listed with the trade name. The label for specific products may vary as to crop, rate, application directions, etc. Crop tolerance to several herbicides is shown in Table 1. A summary of herbicide performance in experiment farm plots is shown in Table 2.

The treatments listed under "Soybean Herbicides" are those considered to be most promising for the range of weed problems and conditions in South Dakota. "Other Soybean Herbicides" may be useful for special weed problems, have experimental label or are useful within limitations.

3. **Rates.** The amount of actual chemical per acre for broadcast application is listed in one column and the amount of

Follow The Label

Federal regulations make it unlawful for any person to use an herbicide in a manner inconsistent with its labeling. This includes the kind of crop and weed; rate, carrier and other application directions; storage, disposal and protective clothing; or other precautions stated.

product per acre is listed with the trade name and formulation in another column. The amount of product, trade name and formulation are not listed for chemicals having numerous trade names.

The range in rates includes most minimum and maximum amounts listed on the product label. The rate for soil applied herbicides varies according to soil texture, soil organic matter and weed species. Additional comments about rates used in South Dakota field tests are included in the remarks column.

It is important to read the label for complete information on the rate to use for that product.

4. **Time to apply.** Time to spray is given for all chemicals with respect to the crop unless otherwise stated.

Preplant—treatments made before the crop is planted and, in most cases, incorporated with a disk. Some herbicides must be incorporated immediately after spraying to prevent loss of chemical to volatilization or breakdown from sunlight. The rainfall requirement is usually less critical and the seasonal variation in performance is usually less with preplant than with preemergence applied herbicides.

Recently, some herbicides have been labeled for use in conjunction with other herbicides applied at a different time, requiring two or more spraying operations. This usually involves a preplant treatment followed by one or more preemergence or post-emergence applications of another herbicide. Do not use herbicides that are not labeled for use in this way.

Preemergence—treatments made after planting, but before emergence of the crop and weeds. Weed control is usually better if tillage operations for seedbed preparation are performed immediately before planting and if the herbicide is applied immediately after planting. For best results, the soil should be free of large lumps and heavy amounts of plant residue.

These treatments require moisture within 1 week after application to move the chemical into the soil so it can be taken up by roots and shoots. More moisture is required if the soil is dry than if it is moist. A shallow cultivation with a rotary hoe or flextine harrow is suggested if weeds emerge before adequate moisture is received. Preemergence herbicides are not effective if the area is disturbed by deep cultivation.

Post-emergence—treatments applied after the crop and weeds have emerged. These are for special weed problems or a rescue operation if other weed control measures have failed. The weeds should be controlled as early as possible to prevent yield losses due to early season weed competition. Post-emergence treatments which must be directed so only the weeds are sprayed require special equipment and usually a height differential between the crop and the weed.

Table 1 WEED CONTROL RATING AND CROP TOLERANCE SOYBEAN HERBICIDES

Table 1 gives a general rating of weed control and crop tolerance with recommended rates used under field conditions. The ratings are based on plot data and other observations. Weed control and crop tolerance vary with soil and weather conditions, the rate used and other factors. For some weeds, special rates listed on the label must be used to get indicated results.

A weed control rating of "1" is assigned those treatments giving the best control of the weed. Perennial control refers to top-growth suppression. Crop tolerance refers to visual effects; these do not necessarily cause a yield reduction.

	Broadleaved Weeds								Grassy Weeds		
	Sunflower	Velvetleaf	Cocklebur	Smartweed	Kochia	Mustard	Lambsquarters	Pigweed	Barnyardgrass	Foxtails	Crop tolerance
Preplant Incorporated											
Basalin	5	5	5	4	2	5	2	2	1	1	E
Treflan	5	5	5	4	2	5	2	2	1	1	E
Tolban	5	5	5	4	2	5	2	2	1	1	E
Cobex	5	5	5	4	2	5	2	2	1	1	G
Treflan + Sencor/ Lexone	2	1	2	1	1	1	1	1	1	1	F
Vernam	4	2	4	4	4	3	1	2	1	1	G
Prowl	5	3	5	3	3	5	1	2	1	1	E
Preplant and Preemergence											
Treflan & Lorox	3	2	3	1	1	1	1	1	1	1	G
Treflan & Sencor/ Lexone	2	1	2	1	1	1	1	1	1	1	F
Preemergence											
Amiben	5	3	4	3	2	3	2	2	2	2	G
Lasso	5	5	5	4	4	4	3	2	1	1	E
Lasso + Lorox	3	2	3	1	1	1	1	1	1	1	G
Lasso + Maloran	3	2	3	1	1	1	1	1	1	1	G
Lasso + *Sencor/ Lexone*	2	1	2	1	1	1	1	1	1	1	F
Lasso + Modown	5	2	4	1	1	3	1	1	1	1	F
Post-emergence											
Basagran	2	2	1	1	3	2	2	4	5	5	E

Weed ratings: 1=Good; 2=Fair; 3=Marginal; 4=Poor; 5=None.
Crop tolerance: E=Excellent; G=Good; F=Fair; P=Poor.

Table 2 SOYBEAN WEED CONTROL SUMMARY

The data in Table 2 provide a measure of weed control consistency. The averages include estimated early-season weed control on demonstration plots for a 3-year period (1974-76) at SDSU experimental farms located near Brookings, Beresford, and Redfield. The major variable is rainfall.

Weed control ratings are for uncultivated plots. You can improve weed control with cultivation, especially for poor or marginal treatments.

Predominant weed species included in the averages are foxtail (green and yellow), redroot and prostrate pigweed and lambsquarters. Rates used were those currently recommended for the area.

Treatment	Percent Weed Control 3-Year, 3-Loc Avg. Gr	Bdlf
Preplant Incorporated		
Treflan	95	91
Cobex	92	89
Tolban	93	87
Vernam	87	80
Preplant Inc. & Preemergence		
Treflan & Sencor/Lexone	97	98
Treflan & Lorox	97	96
Preplant Inc. & Post-Emergence		
Treflan & Basagran	94	95
Preemergence		
Amiben	90	86
Lasso	93	81
Lasso + Sencor/Lexone	93	88

SOYBEAN HERBICIDES

Weeds	Common name	Rate lb/A Actual* (Broadcast)	Product/A-Trade name-Formulation (Broadcast)	Time to Spray and Remarks
Numerous annual grasses; some annual broadleaved	fluchloralin	½-1½	*1-3 pt Basalin-4#/gal*	Preplant incorporated. Immediate incorporation preferred but may be delayed up to 8 hours. Incorporate with a tandem disk set to cut 2-4 inches deep. Cross disking ensures thorough mixing. The low rate is for light, low organic matter soils and the high rate is for heavy, clay soil. The 1 lb/A active rate has been satisfactory for susceptible weeds in most SDSU tests. No label restrictions for crop rotation the following year. Do not graze or harvest forage from treated fields.
	penoxalin	½-1½	*1-3 pt Prowl-4#/gal*	Preplant incorporated. Immediate incorporation preferred but may be delayed for 7 days. Incorporate with a tandem disk set to cut 2-4 inches deep. The lower rates are for light, sandy soil and the higher rates for heavy, clay soil. The 1¼ lb/A active rate has been satisfactory for susceptible weeds in most SDSU field tests. No label restrictions for crop rotation the following year.
	profluralin	½-1	*1-2 pt Tolban-4#/gal*	Preplant incorporated. Immediate incorporation preferred but may be delayed up to 4 hours. Incorporate with a tandem disk set to cut 4-6 inches deep. Cross disking ensures thorough incorporation. The low rate is for light, sandy soil and the high rate for heavy, clay soil. The 1 lb/A active rate has been satisfactory for susceptible weeds in most SDSU tests. No label restrictions for crop rotation the following year.
	trifluralin	½-1	*1-2 pt Treflan-4#/gal*	Preplant incorporated. Immediate incorporation preferred but may be delayed up to 8 hours. Incorporate with a tandem disk set to cut 4-6 inches. Cross disking ensures thorough mixing. Label also includes directions for incorporating with a field cultivator. The low rate is for light, sandy soil, and the high rate for heavy, clay soils. The ¾ lb/A active rate has been satisfactory for susceptible weeds in most SDSU tests. Carryover may injure oats or sorghum planted the following year.
	vernolate	2-3	*2⅓-3½ pt Vernam-7#/gal*	Preplant incorporated. Incorporate immediately with a tandem disk set to cut 4-6 inches deep. Cross disking ensures thorough incorporation. Use low rate on sandy soil and the high rate on heavy clay soil. The 2½ lb/A active rate has been satisfactory for susceptible weeds in most SDSU tests. Plants usually outgrow leaf malformation noted at emergence. *Vernam*-10% granules applied preemergence after planting and incorporatd with shallow tillage have been less consistent than spray formulations. No carryover.
Numerous annual grasses and annual broadleaved	trifluralin and linuron	½-1 and ½-1¼	*1-2 pt Treflan-4#/gal and 1-2½ lb Lorox-50% wp*	Split application. Apply trifluralin preplant as for trifluralin alone. Apply linuron preemergence. Useful where broadleaved weeds are serious. The low rates are for lighter soils and high rates are for heavy, clay soil. Rates of ¾ (trifluralin) and 1 (linuron) lb/A active have been satisfactory for susceptible weeds in most SDSU tests. Combined effects of linuron and atrazine carryover can cause serious crop injury. Do not use on sands. Do not incorporate linuron. Plant seed 1¾ inch deep.
	trifluralin and metribuzin	½-1 and ⅜-½	*1-2 pt Treflan-4#/gal and ¾-1 lb Sencor, Lexone-50% wp*	Split application. Apply trifluralin preplant as for trifluralin alone. Apply metribuzin preemergence. Useful where broadleaved weeds are serious. The low rate is for lighter soils and the high rate for heavy, clay soil. Rates of ¾ (trifluralin) and ⅜-½ (metribuzin) lb/A active have been satisfactory for susceptible weeds in most SDSU tests. Some crop injury may occur on low organic matter knolls or soils with pH of over 7.4. Do not use on sands. Plant seed 1½ inch deep. Combined effects of metribuzin with atrazine carryover can cause serious crop injury. Do not graze or harvest forage from treated fields. Trifluralin carryover may injure oats or sorghum planted the following year. *Treflan* and *Sencor* or *Lexone* may be tank mixed and applied preplant incorporated. Maximum rate of metribuzin suggested is ⅜ lb/A active. More risk of injury on lighter soils than for split application.
Numerous annual grasses; few annual broadleaved	alachlor	2-3½	*2-3½ qt Lasso-4#/gal or 16-26 lb Lasso-15% gran*	Preemergence. Must have ½-¾ inch rainfall within 1 week after application. Rates of 2½-3 lb/A active have been satisfactory for susceptible weeds in most SDSU field tests. Use the higher rates on heavy, clay soil and to improve control of lambsquarters or pigweed. Granules and spray appear to be equally effective. Preplant incorporated spray applications have provided less consistent annual weed control. No carryover.
Several annual broadleaved and annual grasses	alachlor + bifenox	2-2½ + 1.6	*2-2½ qt Lasso-4#/gal + 2 lb Modown-80% wp*	Preemergence. Rainfall required. Tank-mix. Useful where broadleaved weeds are serious. Bifenox can cause serious early season leaf malformation; however, yields have not been reduced under normal growing conditions. Weed control and crop injury affected less by variations in soil texture and pH than for some other combinations. Do not apply at cracking stage. Do not graze or harvest forage from treated crop.
Numerous annual broadleaved and annual grasses	alachlor + linuron	1½-2½ + ½-1½	*1½-2½ qt Lasso-4#/gal + 1-3 lb Lorox-50% wp*	Preemergence. Rainfall required. Tank-mix. Useful where broadleaved weeds are serious. Lower rates are for light, low organic matter soil and the higher rates for heavy, clay soil. Rates of 2 (alachlor) plus 1 (linuron) lb/A active have been satisfactory for susceptible weeds in most SDSU tests. Less pH sensitive than metribuzin. Do not use on sands. Do not incorporate. Plant seed 1¾ inch deep. Combined effects of linuron and atrazine carryover can cause serious crop injury. No carryover.
	alachlor + chlorbromuron	1½-2½ + 1-2	*1½-2½ qt Lasso-4#/gal + 2-4 lb Maloran-50% wp*	Preemergence. Rainfall required. Tank-mix. Similar to alachlor + linuron above. Rates of 2 (alachlor) plus 1½ (chlorbromuron) lb/A active have been satisfactory for susceptible weeds in most SDSU tests. No carryover.
	alachlor + metribuzin	2-2½ + ¼-½	*2-2½ qt Lasso-4#/gal + ½-1 lb Sencor, Lexone-50%wp*	Preemergence. Rainfall required. Tank-mix. Useful where broadleaved weeds are serious. Lower metribuzin rates for light, low organic matter soil. High metribuzin rates are required for large-seeded, hard to control broadleaves. Considerable risk of crop injury from higher metribuzin rates listed on some labels. Metribuzin may cause injury on low organic matter knolls or soil with a pH above 7.4. Do not use on sands. Do not incorporate. Plant seed 1½ inches deep. Combined effects of metribuzin and atrazine carryover can produce serious crop injury. Do not graze or feed forage from treated fields.
Several annual broadleaved and annual grasses	chloramben	2-3	*4-6 qt Amiben-2#/gal or 20-30 lb Amiben-10% gran*	Preemergence. Must have ½-1 inch of rainfall within 1 week after application. The low rate is for lighter, sandy soils. Shallow tillage with rotary hoe or harrow is suggested if dry conditions persist 3-5 days after applying. Granules and spray formulation appear to be equally effective. May be applied as a band over preplant-incorporated *Treflan*. Follow label directions. No carryover.
Some annual broadleaved	bentazon	¾-1	*¾-1 qt Basagran-4#/gal*	Post-emergence. Primarily for special broadleaved weed problems. Weeds in 2- to 4-leaf stage. Larger weeds require the higher rate. Check weed species rating chart. Good coverage required. Labeled for Canada thistle topgrowth control or rescue treatment for large cocklebur using 1-1½ lb/A active. Do not apply within 65 days of harvest. Do not feed treated forage to livestock.

OTHER SOYBEAN HERBICIDES

Several annual broadleaved	bifenox	1½-2	*2-2½ lb Modown-80% wp*	Preemergence. Most useful in a combination or overlay treatment. Improves control of several serious broadleaved weeds. Poor on grasses. May be used at the low rate in combination with *Lasso* and at the high rate as an overlay with *Treflan*. Refer to the section above for details.
Numerous annual broadleaved	chlorbromuron	1-2	*2-4 lb Maloran-50% wp*	Preemergence. Most useful in a combination treatment. Improves control of several serious broadleaved weeds. Weak on grasses. May be used in combination with *Lasso*. Refer to the section above for details.
Smartweed	chlorpropham	2-3	*2-3 qt Furloe-4#/gal*	Preemergence. Primarily useful in combinations to improve control of smartweed. No carryover.

* Acid equivalent or active ingredient.

OTHER SOYBEAN HERBICIDES (continued)

Weeds	Common name	Rate lb/A Actual* (Broadcast)	Product/A Trade name-Formulation (Broadcast)	Time to Spray and Remarks
Numerous annual grasses; some annual broadleaved	dinitramine	⅓-⅔	*1⅓-2⅔ pt Cobex-2#/gal*	Preplant incorporated. Immediate incorporation preferred but may be delayed for 24 hours. Incorporate with a tandem disk set to cut 3-4 inches deep. Cross disking ensures thorough incorporation. Rate varies according to soil texture and organic matter. The ½ lb/A active rate is the maximum rate suggested for most soils. Crop stunting has been observed more frequently than for several other treatments that control similar weeds. No crop rotation restrictions on label. Is labeled for use as a tank mix or overlay application with *Sencor* or *Lexone.*
Some annual broadleaved and annual grasses	dinoseb	6-7½	*2-2½ gal Premerge-3#/gal*	Preemergence. Labeled for combination with *Lasso* or *Amiben.* Improved broadleaved control has not been consistent.
		1½-2¼	*2-3 qt Premerge-3#/gal*	Post-emergence. Apply when soybeans are in cotyledon stage before first true leaves open. Rate adjusted to air temperature. Controls emerged seedlings only. Use special caution in handling.
Numerous annual broadleaved; few annual grasses	linuron	½-2½	*1-5 lb Lorox-50% wp*	Preemergence. Most useful applied at lower rates as a combination or overlay treatment. Improves control of several serious broadleaved weeds. Weak on grasses. Note suggestion concerning rate and crop injury in the section above. May be tank-mixed with *Lasso.* Refer to the section above for details. Tank mixes with *Amiben* and *Ramrod* do not appear to fit most situations.
Numerous annual broadleaved; some annual grasses	metribuzin	⅜-½	*¾-1 lb Sencor, Lexone-50% wp*	Preemergence. Most useful as a combination or overlay treatment. Improves control of several serious broadleaved weeds. Weak on grasses. Note suggestions concerning rate, crop injury and other limitations for the treatments listed in the section above. May be tank-mixed with *Treflan* and *Lasso* or used as an overlay with *Treflan.* Do not graze treated areas after harvest.
Few annual broadleaved	naptalam + dinoseb	3+1½	*6 qt Dynap-2+1#/gal*	Preemergence to cracking. Commercial premix. Some erratic results reported compared to other treatments. Poor grass control. Good kochia control has been observed. Labeled for use in several combination treatments. Use special caution in handling.
Some annual grasses; few annual broadleaved	oryzalin	¾-1½	*1-2 lb Surflan-75% wp*	Preemergence. Chemically related to trifluralin but has given less consistent weed control than preplant incorporated trifluralin. Do not use on soils with more than 3% organic matter. Is labeled for use as tank mix with *Lorox, Sencor* or *Dynap.*
Several annual broadleaved	chloroxuron	1-1½	*2-3 lb Tenoran-50% wp*	Post-emergence. Apply when first trifoliate leaves form and weeds are less than 2 inches tall. Higher rate for velvetleaf and cocklebur. Use surfactant. Some inconsistent results have been reported. Some crop leaf burn usually noted. Do not treat plants under stress.
Numerous annual grasses; some annual broadleaved	vernolate + trifluralin	2 + ½	*2⅓ pt Vernam-7#/gal* + *1 pt Treflan-4#/gal*	Preplant incorporated. Tank-mix. Incorporate as for vernolate alone. Appears to be limited advantage for the combination when compared to either product alone.
Cocklebur	2,4-DB	.175-.22	*– Butoxone-1.75#/gal* *– Butoxone, Butyrac-2#/gal*	Post-emergence. Rescue for cocklebur control. Some twisting and malformation expected on crop. Weed canopy usually reduces injury. Apply from 7 days before blossom to mid bloom stage. Use the lower rate for early treatments.

* Acid equivalent or active ingredient.

Every effort has been made to avoid mechanical error in preparation of this publication. The label should be considered the final guide.

Trade names are used for reader convenience and do not imply product endorsement.

Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the United States Department of Agriculture. Hollis D. Hall, Director of Extension Service, South Dakota State University, Brookings. South Dakota Cooperative Extension Service offers educational programs and materials to all people without regard to age, race, color, religion, sex, handicap or national origin, and is an Equal Opportunity Employer. (Male/Female)

File: 2.4-3—12,000 printed at estimated cost of 9 cents each—1-77mb—7412

Cooperative Exension Service
U.S. Department of Agriculture
South Dakota State University
Brookings, South Dakota 57006

OFFICIAL BUSINESS
Penalty for Private Use $300

Postage and Fees Paid
U.S. Department of Agriculture
AGR 101

U.S.MAIL

COOPERATIVE EXTENSION SERVICE
SOUTH DAKOTA STATE UNIVERSITY
U.S. DEPARTMENT OF AGRICULTURE

Chemical Weed Control in Soybeans 1977

FS 525B
(Revised annually)